

- 13 -

CLAIMS

1. A refrigerant composition when stored in a pressurised gas storage cylinder, said composition comprising in combination a liquid non-CFC refrigerant and a UV fluorescent dye pre-dissolved in a solvent for said dye, wherein said solvent is other than the refrigerant or a refrigeration system lubricant, whereby said refrigerant, dye and solvent comprise a uniformly homogenous composition in the liquid phase within said storage cylinder.
2. A refrigerant composition as claimed in claim 1, further comprising a refrigeration system lubricant.
3. A refrigerant composition as claimed in claim 1 or claim 2, wherein the refrigerant is selected from HFC, HCFC, hydrocarbons, and derivatives and mixtures thereof.
4. A refrigerant composition as claimed in any one of the preceding claims, wherein the refrigerant is selected HCFC-22, HCFC-123, HCFC-124, HCFC-142b, HFC-32, HFC-134, HFC-134a, HFC-152, HFC-152a, HFC-143a, HFC-125, HFC-245ca, HFC 225ca, butane and propane.
5. A refrigerant composition as claimed in any one of the preceding claims, wherein the refrigeration system lubricant is selected from hydrocarbons including natural or refined mineral oils, synthetic hydrocarbons, alkylbenzenes, polyalphaolefins, synthetic polyalkylene glycols and polyolester lubricants.

- 14 -

- A
6. A refrigerant composition as claimed in any one of the preceding claims, wherein the dye is a naphthalimide fluorescent dye.
7. A refrigerant composition as claimed in any one of the preceding claims, wherein the dye comprises from about 0.001 to about 5.0% by weight of the composition based on the weight of the dye per 100 grams of refrigerant.
- sub B<sup>2</sup>
8. A refrigerant composition as claimed in Claim 1, wherein the solvent comprises a mixture of fatty acid ethoxylate and alcohol ethoxylate.
9. A refrigerant composition as claimed in Claim 8, wherein the fatty acid ethoxylate is an ethylene oxide ester based on oleic acid.
10. A refrigerant composition as claimed in Claim 8, wherein the alcohol ethoxylate is cetyl oleyl alcohol ethoxylate.
- sub B<sup>2</sup>
11. A refrigerant composition as claimed in any one of the preceding claims, suitable for operation in a system in a preselected mode including cooling, freezing, heating, ventilating and air conditioning.
12. A refrigerant composition as claimed in claim 11, wherein the air conditioning system is a motor vehicle air conditioning system.
- red B<sup>3</sup>